ITL15-2 Industrial Triode

The **Marshall Components ITL15-2** is a power triode designed specifically for industrial applications.

- Uses a coaxial design and metal-ceramic technology
- May operate in CW or pulse mode. For operation in pulse mode, the parameters depend on each equipment characteristics.
- It is an forced air cooled tube.
- The anode voltage is 13kV.
- Output power is 45kW in CW mode.
- The max anode dissipation is 20kW.
- The frequency up to 120MHz.

General Characteristics

Electrical

Filament	Thoriated-tungsten mesh
Filament voltage	(+5%, -10%) 7.2V
Filament Current	180A
Surge current (max)	700A
Cold resistance	5mΩ
Amplification factor	(approx) 25
Capacitances:	
Grid to filament	60pF
Grid to anode	25pF
Transconductance (Ua:4kV,Ia:4A)(approx)	60mA/V

Mechanical

Operating position	Vertical, Anode up or down
Maximum dimensions:	see outline drawing
Net weight	9.0 kg

Maximum ratings

Frequency	120MHz
Anode voltage	
up to 30MHz	13kV
up to 30 to 60MHz	11kV
up to 60 to 90MHz	9kV
from 90 to 160MHz	7kV
Control-grid voltage	-1.5kV
Anode current, CW	40A
Control-grid current:	
at full load	0.8A
at no load	1.5A
Peak cathode current, CW	40A
Anode dissipation	
Inlet air temperature, 25℃	8.5kW
Inlet air temperature, 45℃	5kW
Grid dissipation:	
up to 30MHz	600W
up to 30 to 60MHz	520W
up to 60 to 90MHz	460W
from 90 to 120MHz	400W
Grid resistance (tube not conducting) max	10kΩ

Cooling

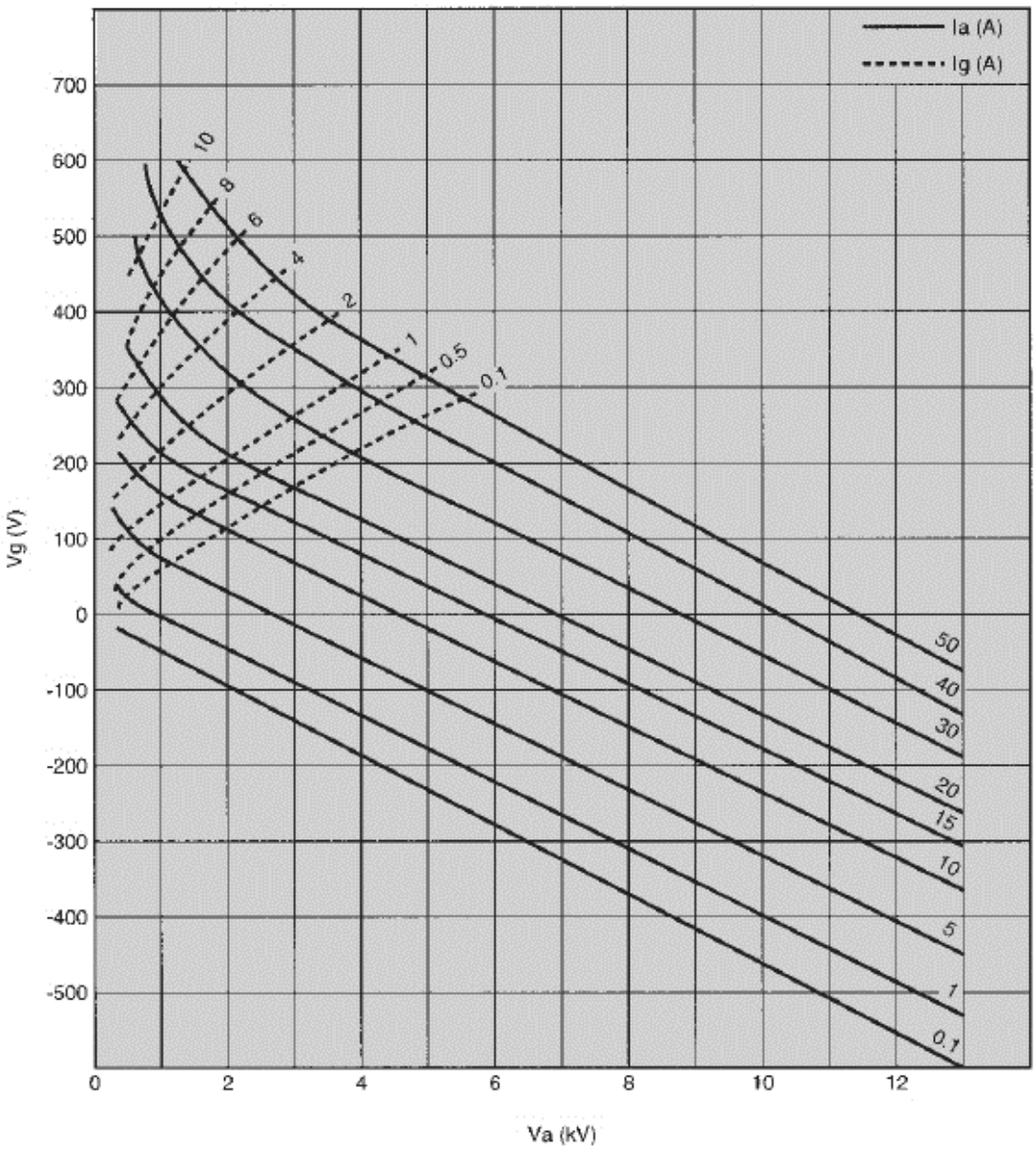
Anode cooling	forced air
Cooling air flow	5 m^3/min
Inlet air temperature	45℃ max
Temperature at any point on tube envelope	220℃max

Typical operation

Class C RF oscillator for industrial applications

Examples	**1**	**2**	
Frequency	30	30	MHz
Anode voltage	12	10	kV
Grid bias	-650	-600	V
Grid voltage	910	920	V
Anode current	5.0	6.0	A
Grid current on load	0.33	0.60	A
Anode input power	60	60	kW
Anode output power	45	45	kW
Anode dissipation	14.5	14.5	kW
Grid dissipation	75	170	W
Grid resistance	1970	1000	Ω

CONSTANT CURRENT CHARACTERISTICS



OUTING DRAWING (MM)